

15. (Twice Amended) A method as set forth in claim 13 characterized by the following step:

- establishing a code agreement between the external data source and the local computer system prior to the encoding step.

REMARKS

Applicant would like to thank the Examiner for the courtesy of the telephone interview on September 9, 2002.

During the interview, the March 7, 2002 Office Action was discussed. In that Office Action, the prior Amendment was objected to under 35 USC 132 because of the addition of new matter. Namely, the Examiner objected to the change of the word "code" to word "key". Applicant has amended the Specification by changing the word "key" back to the word "code".

Attached hereto are copies of the drawings showing the proposed changes of the word "key" to the word "code" in red. Applicant respectfully requests that the requirement to furnish substitute drawings be held in obedience until allowable subject matter is indicated.

Claims 5 and 12 were rejected under 35 USC 112 as containing subject matter which was not described in the Specification. In particular, the Examiner questioned Applicant's use of the term "data gaps", the term "volume data", how data gaps can be directly closed by the additional protection data, and how filling up of the data gaps is achieved. During the interview, the Examiner was directed to Paragraph [0059] in the Specification which discloses data

gaps stored in the local data storage means so that the document in the local data storage means is unusable. Paragraph [0059] also discloses that data gaps may be filled up as additional data from the external data source. In addition, in Paragraph [0137] of the Specification, there is disclosed that the data gaps can be, for example, individual words of the text document. Applicant has amended Claims 4 and 5 by deleting "volume data" and inserting therefor "the non-reconstructed data". Thus that phrase now has antecedent basis from Claim 1.

Claims 5, 12, 14 and 15 were rejected under 35 USC 112 as being indefinite.

The Examiner indicated that in Claim 5, the phrase "the data gaps can be directly closed" is indefinite. Applicant has amended Claim 5 by deleting the term "can be" and inserting therefor "are" wherein the phrase now reads "the data gaps are directly closed".

As to Claim 12, the Examiner indicated that it was not clear as to what was meant by "the gaps are filled up". Again, the Examiner is directed to Paragraph [0059] of the Specification indicating that data gaps can be brought about by additional data from the external data source by way of the network. Thus it is submitted that the phrase "the gaps are filled up" is definite.

The Examiner indicated that the phrase "the data source" in Claim 14 has no antecedent basis and suggested that the word "external" be inserted before "data". Applicant has amended Claim 14 to comply with the Examiner's request.

The Examiner also indicated that the phrase "agreeing on a key" in Claim 15 was indefinite. Applicant has amended Claim 15 by deleting the phrase "agreeing on a key" and replacing it with "establishing a code agreement. The Examiner is directed to Paragraph [0111] of the Specification which teaches the establishment of a code agreement between the local computer system and the server module.

Claims 1, 3, 4, 6-11 and 13-18 were rejected under 35 USC 102(e) as being anticipated by U.S. Patent 5,838,873 issued to Blatter.

Claims 7 and 12 were rejected under 35 USC 103 as being obvious over the Blatter patent.

Applicant's invention is directed to an apparatus and method for protecting the representation of documents which may be published electronically with a local computer system that can be connected locally by way of a data transmission network to an external data source and the local system documents can be stored only in a form which is not meaningful or useable to a user. Storage of such documents in a useable form is explicitly not possible. Additional protected data is received over the network from the external data source and is linked with stored data representing a non-reconstructed partial, particularly, a non-linear form of the document, to produce a reconstructed linear document which is meaningful to the user. For retrieving, reconstructing and using the document, it is required that an online, or at least one temporary online, contact is made from the local system via the network to the external data source in order to render the document useable.

During the course of the interview, the primary difference between Applicant's claimed invention and the Blatter patent were pointed out to the Examiner, namely, a requirement of readability or useability of the published document is dependent on an online, or at least one temporary online, contact between the local computer system and the external data source via the data transmission network. The Blatter patent utilizes a smart card 130 which is a physical card owned by the user which is encrypted with data in order to enable the user to use the pay portion of the television system. There is no disclosures or suggestion in the Blatter patent to enable the use of protected data to make the documents useful, being dependant on an online, or at least one temporary online, contact between the local computer system and the external data source. It is submitted that the owner of a smart card would have no incentive or need to bring in or enable the use of protected data through an online, or at least temporary online, contact between the local computer system and the external data source via a data transmittal network.

Independent Claim 1, as amended by the prior Amendment, contains the language linking the readability and usability of the produced document to online, or at least temporary online, contact between the local computer system and the external data source via the data transmission network. During the course of the interview, the Examiner pointed out that independent Claim 9, while calling for the establishment of an online, or at least temporary online, contact between a local computer system and an external data source via the data transmission network did not contain such linkage. Applicant has

amended Claim 9 by importing substantially the same language from Claim 1 so that the readable or useable produced document is clearly dependent on the online, or at least temporary online, contact between the local computer system and the external data source via the data transmission network.

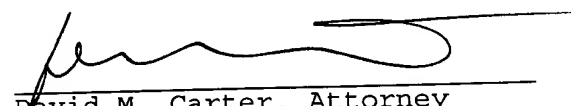
Thus it is submitted that independent Claims 1 and 9, as well as dependent Claims 3-8 and 10-18 are not anticipated or rendered obvious by the Blatter patent.

During the course of the interview, the undersigned indicated to the Examiner that the European application corresponding to this Application had been recently allowed. The Examiner requested a copy of the European patent specification. Attached hereto is a copy of European Patent Specification EP 0 978 022 B1.

In view of the above Amendment and Remarks, it is believed that this Applicant is in condition for allowance and an early allowance is solicited.

Respectfully submitted,

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MARKED-UP VERSION OF SUBSTITUTE
PARAGRAPHS IN THE SPECIFICATION

[0035] Structural elements in databases are given by database indices or the addressing with the primary code [key] or foreign code [key] or by other organizational data for structuring and managing a database. With a hard disk, diskette or CD-ROM, e.g., the structure element are included in the FAT or in the Inode table.

[0041] With the creation of the technological framework conditions for electronic publication of that kind, there arises the technical requirement of protecting such media from unauthorized access or from illegal copying so that the copyright of the supplier or provider can be effectively protected: due to the digital character of the electronically published information copying (even unauthorized) could occur without a loss of quality; therefore the question of protecting such electronic publications is an existential and fundamental code [key] question for the public release of (digital) video, audio and print media etc. in electronic form.

[0060] In accordance with a preferred development of the invention which in this respect is to be considered as the best mode of carrying the invention into effect the apparatus according to the invention additionally has an encoding means with which the additional data that are transmitted by way of the data network can be encoded in order on the local side further to enhance the security of usable

access to the documents: an interchange of the additional data - that is to say for example the sequence or gap data - , which interchange is protected from third-party access, preferably occurs in the mode of a code [key] agreement, which forms the basis for the encoding procedure, between the external data source and the local computer system, and it is only after local decoding of those additional data that they can be processed by the linking means to afford usable documents.

[0107] The document store 18 - so-to-speak the local document delivery unit - is designed in the present embodiment in the form of a local mass storage device which is directly connected to the processing unit and which already contains constituents of the document to be electronically published by way of the network. The output unit 20 forms the connection between the local computer 14 and the user and is selected in dependence on the document to be published: in the present case of publication of electronic drawings and graphics, the output unit 20 would substantially comprise a monitor which is suitable for the representation of such graphics, with associated data processing, while in other situations of use - for example involving the transmission of texts or additional sound as in the case of audio-visual electronic media - an acoustic output unit, a printer or the like may additionally or alternatively be connected. The input unit 22 is for example in the form of a keyboard or mouse and serves to the user for procedural control or for the

input of commands for calling up the documents which are electronically published in accordance with the invention.

[0108] As a component the central processing unit 16 has a code [or key] management unit 24 with associated code [store or key] storage 25, a document structure or construction module 26, a dialogue control module 28 and a clock 30. The Figure does not show a communication module which is provided for co-operation with the network 10.

[0109] In comparison, provided in the host system 12 is a code [key] server module 32, a copyright server module 34, a billing server module 36 and - optionally and in accordance with a preferred development - a document or update server module 38.

[0111] The purpose and function of the code [key] unit 24 (also meaning the data safeguard unit) is to provide for a code [key] agreement in the data exchange with the code [key] server module 32, that is to say to make available to the code [key] unit 24 a unique and secret code [key] which is safeguarded against any access and with which then the code [key] unit can decode an item of sequence or gap information transmitted by the copyright server module 34 and prepare it for use by the document construction module 26 in the local computer: by means of that decoded item of sequence or gap information the data construction module 26 then accesses the data bank of the document store 18 and uses the item of information of the copyright

server module, which is received over the network, in order to process the unordered or gappy data of the data store 18 to afford complete user data which are then made available to the user by way of the output unit 20.

[0119] In step S10 the integrity of the local system is then tested - therefore a test is made by means of inquiries and test procedures to ascertain whether misuse attempts have been made in the local computer system or precautions are involved in respect thereof - the local computer system is initialized for the subsequent code [key] and data exchange with the host system and the necessary identification and billing data with the billing server module 36 are transmitted.

[0120] The subsequent code [key] agreement in step S11 then involves the transmission of a code [key] from the (secure) code [key] server module 32 of the host system 12 to the local computer; the code [key] unit 24 stores that code [key] in the code [key] storage 25.

[0121] In step S12 the local computer then receives the encoded sequence signal, that is to say in the example shown in Figure 4 the numerical sequence 3-2-8-1-5-4-7-6, in a form which is encoded by that in accordance with the code [key] agreement (step S11). The code [key] in the code [key] storage 25 then permits decoding of that sequence signal in step S13 by the code [key] unit 24.

[0124] Alternatively the method could also involve feedback connections to other earlier method stages: thus for example, in the manner shown by the arrow 44, the loop would be closed after step S16 to a location prior to the step S12 so that in this case the local system would receive a new encoded sequence over the network, for further useful data which are to be locally processed, and would decode it only prior to repeated execution of the processing procedure and display in steps S14 and S15 (step S13). As a further alternative the loop could even be closed at a location before the step S11 (arrow 46); in that case a new code [key] agreement would be made and then the subsequent loop would be executed again.

[0149] Another transfer of the operational instructions could be realized by a state of the art periodic or non-periodic broadcast of these individual instruction data. These data have to be identified only by an end user program that got a registered access right to the requested electronic document by the above releasing server. The method and software of how to extract data from this public broadcast data stream could be public as well. The extraction algorithm only needs a secret session code [key] or secret operational instructions to identify or to select only his requested instructional data. In order to be temporary off-line from a network in this manner, additional hardware has to listen for such broadcast messages.

MARKED-UP VERSION OF AMENDED CLAIMS

1. (Twice Amended) Apparatus for protecting electronically published documents with a local computer system which can be connected locally by way of a data transmission network, to an external data source and which is adapted to call up, execute, or output the electronically published documents, wherein the local computer system comprises local data storage means which is adapted for the storage of data of the electronically published document in a form which is not usable for a user, wherein the local computer system further comprises means for receiving and processing additional protection data provided by the external data source by way of the data transmission means, as well as a linking means which is adapted to link a storage content of the local data storage means with the additional protection data and to produce the electronically published document therefrom in a form usable, meaningful or suitable for sensory perception by the user, and wherein the local computer system comprises output means selected in accordance with the type of the document to be electronically published, adapted to call up, execute or output the document in the form usable, meaningful or suitable for sensory perception by the user, wherein the ^{local} data storage means is adapted to store the electronically published document in a non-reconstructed, in particular a non-linear form, wherein the non-reconstructed document can be converted into a reconstructed linear document, which is usable by the user, by the action of the linking means, utilizing the additional protection data, characterized in that

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the local computer system is designed to ensure such that a local storage of the produced document in the form usable, meaningful or suitable for sensory perception is not possible, and a readability or usability of the produced document is dependent on an online, or at least one temporary online, contact between the local computer system and the external data source via the data transmission network.

4. (Twice Amended) Apparatus as set forth in claim 1 characterized in that the local data storage means is a magnetic or optical mass store in which the non-reconstructed [volume] data of the electronically published document are stored in a plurality of storage locations which are not interrelated, and wherein the additional protection data denote an interconnection or a sequence of the storage locations.

5. (Twice Amended) Apparatus as set forth in claim 1 characterized in that the local data storage means is a magnetic or optical mass store, wherein the non-reconstructed [volume] data of the electronically published document which is stored therein have data gaps and the data gaps are [can be] directly closed by the additional protection data, or wherein the additional protection data include storage location identifications which refer to separate storage locations of the local data storage means, in which data, suitable to filling up the data gaps, are stored in a manner corresponding to the data gaps.

6. (Twice Amended) Apparatus as set forth in claim 1 characterized by an encoding means which is embodied by means of a first module of the external data source and a second module of the local computer system and which is adapted for the protected [protection] transmission of the additional protection data from the external data source to the local computer system.

9. (Twice Amended) A method of protection representation of electronically published documents, comprising the following steps:

- establishing an online, or at least one temporary online, contact between a local computer system and an external data source via a data transmission network,
- calling up document data from a local data storage means which is part of the local computer system and which stores the document data in a non-reconstructed, particularly a non-linear form,
- receiving additional protection data of the external data source connected to the local computer system by way of the data transmission network thereby making readability or usability of the produced document dependent on the online, or at least temporary online, contact between the local computer system and the external data source via the data transmission network,
- linking the additional protection data to a content of the local data storage means to produce document data in a form usable, meaningful or suitable for sensory perception by the user,
- calling up, executing or outputting the document data in said form, usable, meaningful or suitable for sensory perception by the

user, by means of output means selected in accordance with the type of the document to be published electronically, and

- ensuring such that a local storage of the produced document in the form usable, meaningful or suitable for sensory perception is not possible.

14. (Twice Amended) A method as set forth in claim 9 characterized in that the step of receiving the additional protection data includes the following steps:

- encoding of the additional protection data by the external data source,
- transmitting the encoded additional protection data by way of the data transmission network, and
- decoding the encoded additional protection data by the local computer system.

15. (Twice Amended) A method as set forth in claim 13 characterized by the following step:

- establishing a code agreement [agreeing on a key] between the external data source and the local computer system prior to the encoding step.

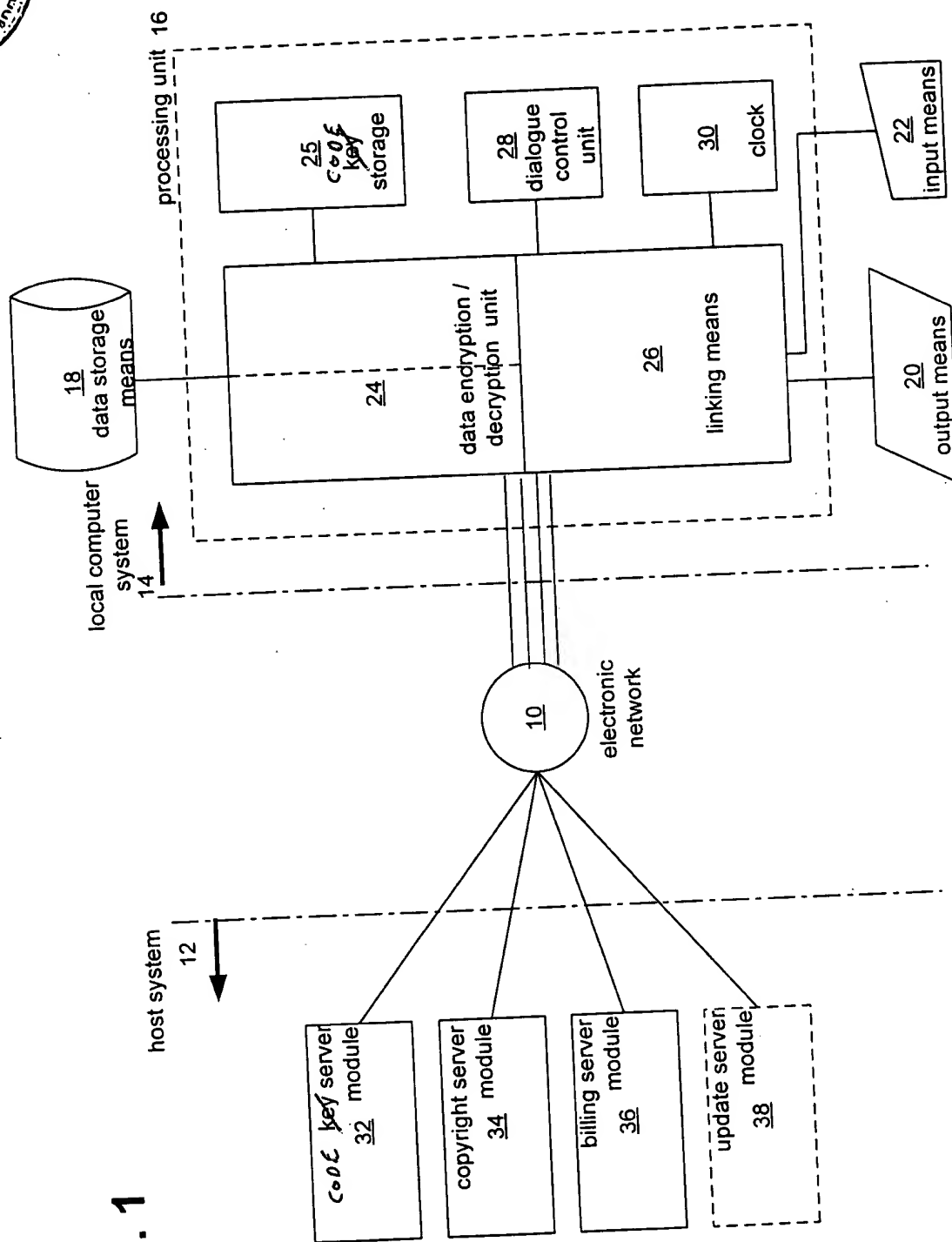
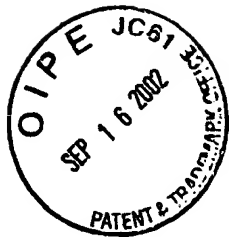
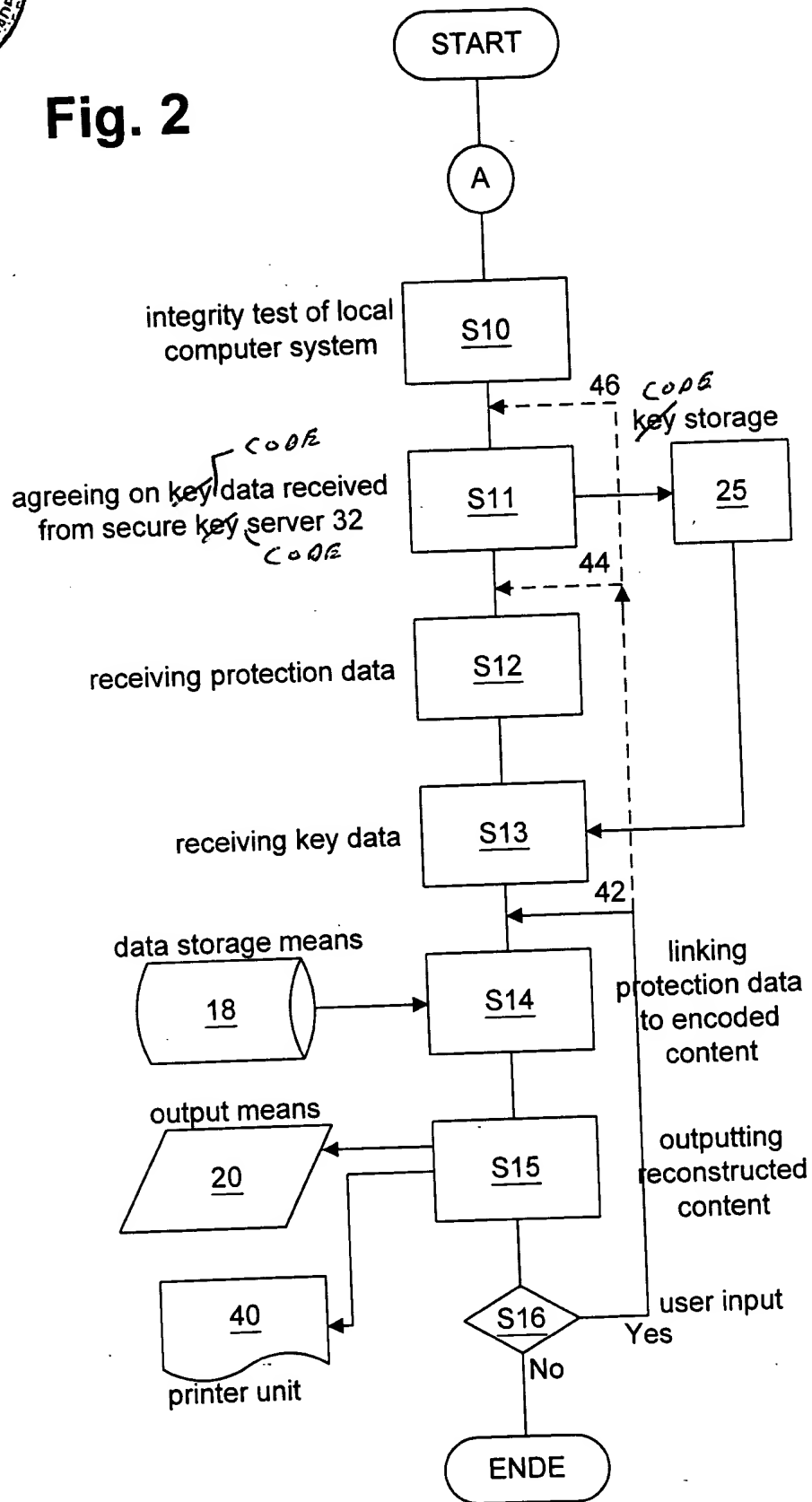


Fig. 1

Fig. 2



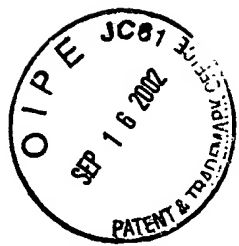


Fig. 3

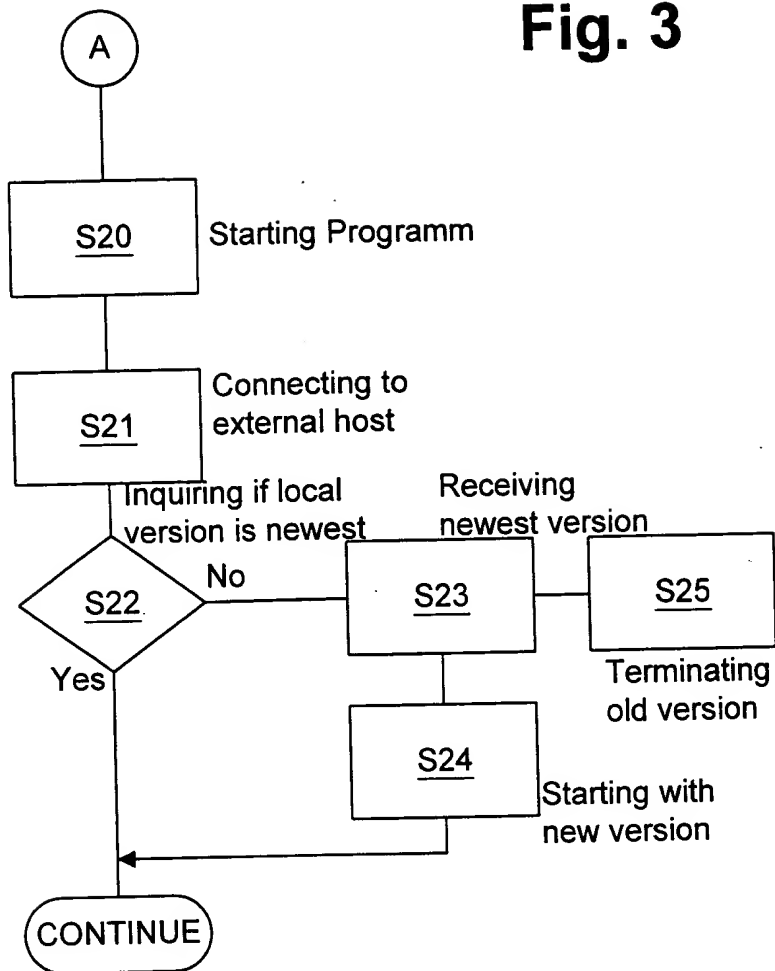


Fig. 4

